# Permit Application for Inland Wetlands & Watercourses Activity

for

# Mountain Road and Albany Avenue (Route 44) Intersection Improvements

West Hartford, CT

State Project No. L155-0002

Prepared by:

TOWN OF WEST HARTFORD DIVISION OF ENGINEERING 50 South Main Street West Hartford, CT 06107

**APRIL 1, 2019** 

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#### **PROJECT OVERVIEW**

The Town of West Hartford was recently awarded a grant from the Connecticut Department of Transportation (ConnDOT) through the Local Transportation Capital Improvement Program (LOTCIP) for improvements along Mountain Road at the intersection of Albany Avenue (Route 44). This is a very busy intersection, which experiences excessive vehicular delays on every approach. This project will provide additional intersection capacity, which will accommodate the existing and future vehicular demand, and improve intersection safety.

The improvements are primarily focused on Mountain Road which is a Town road. Albany Avenue (Route 44) is a State road under the jurisdiction of ConnDOT. The proposed project includes roadway widening on Mountain Road north and south of Albany Avenue to provide an additional travel lane on each side of the intersection. The new lane arrangement will offer an exclusive left turn lane, through lane, and a shared through/right turn lane and on-street bicycle lanes in each direction. At the intersection, the travel lanes will be ten feet wide with five-foot-wide bicycle lanes and no shoulders. This configuration will utilize the existing right of way, and minimize the need for additional easements. The narrow travel lane widths will provide a traffic calming benefit. The curb radii at the intersection have also been reduced to eliminate excess pavement while still accommodating truck turning movements. This change will also help to calm traffic near the intersection. Approximately 400 feet from the intersection of Albany Avenue, the roadway transitions back to a single eleven-foot-wide travel lanes with four-foot-wide bicycle lanes in each direction. The length of project along Mountain Road is approximately 1470 feet and approximately 200 feet along Albany Avenue. The areas of proposed widening will require full depth construction of the roadway section, while the remainder of the roadway surface will be milled and paved as part of the project. The traffic signal at the intersection of Mountain Road at Albany Avenue is a State maintained traffic signal and is proposed to be replaced as part of the intersection improvements.

This project incorporates Complete Streets elements with consideration for all users, particularly bicyclists and pedestrians. This project includes on-street bicycle facilities on both sides of Mountain Road, new bicycle lane signage, and pavement markings. Two new mid-block crosswalks will be added on Mountain Road. One crossing will be located near the intersection of Mountain Farms Road and the other near Fairfield Road. Both crosswalks will be enhanced with push-button activated warning lights.

#### **TRAFFIC DATA**

This intersection is over capacity, particularly during the weekday morning and evening peak hours. Traffic routinely extends for hundreds of feet to the north and south on Mountain Road. Mountain Road is classified as a Minor Urban Arterial and carries an average weekday daily traffic of 11,530 (both directions) and 1,260 and 1,300 vehicles in the weekday AM and PM peak hours, respectively. The projected 20 year average daily traffic volume on Mountain Road is 13,840 vehicles (both directions). Albany Avenue (State Route 44) is classified as a Principal Urban Arterial and carries has an average weekday daily traffic of 21,620 (both directions) and 2,390 and 2,120 vehicles in the weekday AM and PM peak hours, respectively. The projected 20 year average daily traffic volume on Albany Avenue is 25,940 vehicles (both directions). The 85th percentile speed on Mountain Road is 41 miles per hour. The 85th percentile speed on Albany Avenue in the westbound direction is 46 miles per hour. The posted speed limit is 30 and 40 miles per hour on Mountain Road and Albany Avenue, respectively.

Albany Avenue carries approximately 65 percent of the intersection traffic with 35 percent of the intersection traffic on Mountain Road. The traffic signal is part of a coordinated system along Albany Avenue which receives the majority of the green time. This leads to extended delays and significant

queues along Mountain Road. The replacement of the traffic signal is required as part of this project due to the roadway widening and the additional travel lanes. The proposed capacity improvements will reduce motorist stops, delays, queues, and emissions. The proposed intersection modifications will replace a short southbound Mountain Road right turn lane with a much longer shared through/right turn lane. The northbound and southbound Mountain Road left turn lanes will also be extended to accommodate the left turn demand. These physical improvements along with the retiming of the traffic signal will improve the overall intersection performance. The proposed traffic signal will remain under the State's jurisdiction and electrical costs will continue to be paid by the Town of West Hartford. New signing and pavement markings will also be included throughout the project area.

#### **COMPLETE STREETS**

This project incorporates Complete Streets elements with consideration for all users, particularly bicyclists and pedestrians. This project will increase safety and awareness to the benefit of vulnerable users. The original concept plan included additional concrete sidewalk north of Albany Avenue on the east side of the street, which would have eliminated a sidewalk gap between the Lovelace neighborhood and Albany Avenue. As the design progressed, grading posed a significant challenge, right-of-way was very limited and an easement would be required. Based on some preliminary discussions with some of the abutting property owners it was apparent that the extension of this sidewalk would not be feasible. This change provided an opportunity to incorporate four-foot-wide on-street bicycle lanes on both sides of Mountain Road, which sees a significant number of cyclists. New bicycle lane signage and pavement markings will also be installed. In order to accommodate the bicycle lanes, approximately 500 feet of under-utilized sidewalk along the east side of Mountain Road just south of Albany Avenue will be removed. The tradeoff for pedestrians will be two new mid-block crosswalks which will be added on Mountain Road. One crossing will be located near the intersection of Mountain Farms Road and the other near Fairfield Road. Both crosswalks will be enhanced with push-button activated warning lights. These mid-block crossings will be well positioned and serve large neighborhoods which currently do not have a safe way to cross Mountain Road.

#### WATERCOURSE AND STORMWATER DRAINAGE

A FEMA Flood Hazard Zone encompasses much of the Albany Avenue and Mountain Road intersection. These areas have been located on the plans. In years past the areas north and south of the intersection has experienced some flooding issues. The Town has performed maintenance and implemented some drainage improvements in 2010 which have alleviated these issues. A video assessment has been performed on portions of the Town's storm drainage system. Based on the video assessment, the existing system is in good condition.

Due to the roadway widening, several catch basins may need to be relocated. The intent is to utilize the existing system as much as possible provided the structures are in good condition. In most instances new basins will be installed over the existing storm drain pipes or will require short pipe extensions. Many of the new catch basins will be enlarged to double basins to reduce the probability of roadway flooding in the future. Any new roadway drainage will be designed for a 10-year storm event and in accordance with the "Drainage Manual" prepared by the ConnDOT.

An existing double barrel box culvert carrying Mountain Farms Brook under Mountain Road is located within the project limits, just south of Albany Avenue. The culvert is Town owned and maintained. It is a twin concrete box culvert (openings are 5.5 feet high by 7 feet wide) that was installed in 1980 and it is in good condition. Accumulated debris was removed from both barrels of this culvert in the summer of 2012 and the culvert is routinely inspected every other year. The existing double box culvert will need to be

extended approximately 21 feet to accommodate the roadway widening. An easement for this extension was previously obtained by the Town.

The twin box culvert extension will be constructed in stages. This approach will require some minor stream diversion, but overall with allow Mountain Farms Brook to continuously flow. The contractor will be required to submit a water handling plan at the beginning of the project for review and approval by the Town's Engineering Division. The proposed extension will be constructed with precast units and include an angled endwall section to follow the natural drainage course of the brook. This will help stabilize the northern bank, which shows evidence of erosion. Rip rap is not proposed along the banks of the watercourse as part of this project. Accumulated sediment was originally intended to be removed from the inlet side of the northern box culvert, which currently diverts most of the flow through the southern box culvert. Representatives from CT Department of Energy and Environmental Protection (CT DEEP) recommended leaving the sediment in place. This would reduce impacts to the watercourse and help to maintain the water depth in the southern box culvert. Removing the sediment would create a more balanced flow, resulting in shallower depths in both culverts which could negatively impact aquatic life in the brook. Material excavated from the watercourse to facilitate the culvert extension will be stockpiled and spread over the concrete floor of the new box culvert to provide a more natural surface. Extending the box culvert approximately 21 feet will impact approximately 2,200 square feet or 0.05 acres within the watercourse/ wetland area. Roadway widening in other areas of the project will impact approximately 8,700 square feet or 0.20 acres. The project will not change the peak flow of the watercourse.

#### **PERMITS AND IMPACTS**

An Environmental Review was performed by ConnDOT, the findings have been summarized in a memorandum dated January 9, 2018. The following potential impacts were highlighted for additional evaluation and investigation:

- Complete Streets The project contains design elements that could impact the function of the facility by non-motorized users and will need to comply with ConnDOT's Complete Streets Policy.
- Historic and Archeological Resources The Town coordinated with the State Historic Preservation Office to determine if eligible archeological resources will be impacted by the project. The project area is located within previously disturbed areas and there are no historical buildings within the project area. SHPO has provided a letter indicating that there are no anticipated impacts associated with this project.
- Endangered Species The project is not anticipated to impact any vernal pools, impaired water body, aquifer projection area, CT DEEP Natural Diversity Database state listed species habitat, or fisheries habitat. ConnDOT's Office of Environmental Planning noted that the Northern Long Eared Bat is listed on the Federal List of Endangered Species and may be present within the project area. The project is not located within a ¼ mile of any known hibernacula or within 150 feet of any known maternity roost trees so the project is not likely to adversely affect this species. Since LOTCIP does not use any Federal funds, coordination with the United States Fish and Wildlife Service is not required.
- Water Resources The box culvert extension work will obviously occur within the stream channel. Other
  project work will also occur in wetland areas and within the Town of West Hartford Regulated Area. A
  Need Determination Form is not required for projects funded through LOTCIP with no major work on
  State facilities (traffic signal work is exempt).

In lieu of a Needs Determination Form, an Interagency Coordination Meeting was held with representatives from US Army Corp of Engineers, CT DEEP, ConnDOT, and the Town of West Hartford to discuss the project, potential impacts, and required permitting. Based on the Interagency Coordination Meeting, the following environmental permits will be required:

- Army Corps of Engineers Section 404 Permit Based on discussions during the Interagency Coordination Meeting and the amount of wetlands impacted, the Army Corps of Engineers determined a 401 Water Quality Permit: Self-Verification (GP19) will be required.
- CT DEEP 401 Water Quality Permit Based on discussions during the Interagency Coordination Meeting and the amount of wetlands impacted, the CT DEEP determined a 401 Water Quality Permit: Self-Verification will be required.
- o Inland Wetlands/ Watercourse Permits A large portion of the project is located within the Town's 150 foot regulated buffer of Mountain Farms Brook or within the regulated wetland area. The culvert extension will require working within the limits of the Mountain Farms Brook and temporary diversion of the watercourse may be required to accommodate the installation of the additional box culvert sections. A Town of West Hartford Inland Wetland Permit will be required. The permit will be obtained prior to final design and any requirements will be incorporated into the construction activities.
- Stormwater Discharge Permit is <u>not</u> required, as the amount of erodible soil disturbance will be less than one acre.
- Flood Management Certification A portion of the project is located within a regulated floodway/floodplain, however since the scope of the work is limited to a culvert extension, a certification is not required.

**Erosion and Sedimentation Control:** Erosion and sedimentation controls will be designed and maintained throughout the project limits during construction. These controls will be based on "Guidelines for Soil Erosion and Sediment Control" prepared by the Connecticut Council on Soil and Water Conservation. Typical control measures may include, but are not limited to: silt fence, catch basin filter sacks, construction entrance, and hay bale dewatering basin.

**Encroachment Permit:** This project involves modifications to the intersection of Albany Avenue (Route 44), which is a State facility. The Town will continue working with ConnDOT to discuss the specifics of the project and how it can best advance through design to construction. An encroachment permit will be required and will be obtained during the design process and prior to authorization to advertise for construction.

Maintenance and Protection of Traffic: Traffic will be maintained throughout the project area during all phases of construction. Traffic control will be provided by private duty West Hartford Police or other trained and certified Trafficpersons. The construction sequence and phasing will be discussed with the contractor prior to the start of construction. Temporary shoulder/lane closures are anticipated to facilitate the roadway work. Work will be sequenced such that the roadway surface is temporarily patched or covered with steel plates to provide a safe travel surface and all travel lanes will be re-opened at the end of each workday. Signed detours are not anticipated for this project.

#### **UTILITIES**

Impacts to underground utilities are expected to be fairly minor and most likely limited to the resetting of manhole rims, and valve gate covers. Six utility poles will require relocation to accommodate the widening of Mountain Road. In addition, the Frontier communication cabinet on the northwest corner will need to be relocated. Utility pole relocation work should be completed prior to the start of the project to minimize impacts to the roadway work.

The Town has already notified Frontier Communications and Eversource and sent preliminary design plans for their review and comment. A Utility Coordination meeting will be scheduled in spring of 2019 to address any concerns and continue the development of the utility relocation plans. Utility work schedules and utility relocation plans will be provided in the final design documents.

#### **RETAINING WALL**

As part of this intersection improvement project, the existing retaining wall on the west side of Mountain Road just north of Albany Avenue will need to be replaced and shifted slightly to the west to accommodate the proposed roadway widening. The new wall will be a modular block retaining wall system. The Town will coordinate with the adjacent property owners to obtain an easement to facilitate construction and discuss ownership and the long term maintenance of the walls. Two smaller modular block retaining walls may also be required along Mountain Road, north of Albany Avenue to facilitate grade changes. These walls (if needed) will vary in height, but will not exceed three feet. These structures will be constructed with typical modular concrete paver units, following the Town's standard detail and the manufacture's recommendations.

#### **LANDSCAPING**

The Town has partnered with The Green Machine, landscape contractor for the Mountain Commons condominium development. The Green Machine is currently developing a landscape plan and planting recommendations for the areas along the east side of Mountain Road along the Mount Commons frontage. Based on feedback from the Condominium Association, evergreen plantings will be incorporated into the project to provide year-round screening. In addition, the overgrown underbrush and vines will be selective cleared. At the request of the Condominium Association, the 15 ornamental cherry trees located along the east side of Mountain Road will be removed. These trees are in poor health and are nearing the end of their life cycle, a couple have already been removed. They will be replaced with flowering street trees that are slow growing, so as not to impact the overhead utility wires.

Just north of Albany Avenue, on the east side of Mountain Road, five trees and several perennial plants/shrubs will need to be removed to facilitate the roadway widening. These trees and shrubs will be replaced with the same species and coordinated with the Governor's Row Condominium Association.

The existing shrubs planted along the top of the existing retaining wall on the west side of Mountain Road at 3 Lovelace Drive will be removed to facilitate the new retaining wall. The property owner has requested a privacy fence be installed along the top of the new retaining wall, but vegetative screening may also be considered. The Town will continue to work with the property owner as the design progresses.

#### **RIGHTS OF WAY**

A right of entry will be required along the east side of Mountain Road to the north of Albany Avenue from the Governor's Row development (12 Governor's Row). Several trees and shrubs will need to be removed to accommodate the roadway widening. Any trees or shrubs that are removed will be replaced with the same species and work will be coordinated with the Governor's Row Condominium Association.

An easement will be required from the property owner at 3 Lovelace Drive to facilitate the construction of the retaining wall and installation of landscaping and/or a vinyl fence. The Town will handle all aspects of the acquisition of the easement, including: coordinate with the property manager and residents, coordination with the Town Council, and preparing/filing all required documentation. The total area needed for the easement would be of approximately 1,235 square feet.

A Public Highway easement was previously obtained by the Town from the Mountain Commons Condominium development, which will facilitate the roadway widening and box culvert extension just south of Albany Avenue.

#### **FEASIBLE AND PRUDENT ALTERNATIVES**

The Town evaluated several alternatives through the development of this project, including:

- No Improvements Maintaining the existing conditions and lane arrangement is not a feasible solution. Significant congestion and traffic queues are the basis for this project and would continue if improvements are not implemented.
- Adjust Traffic Signal Timings This alternative provides minimal improvements based on the current traffic volumes. Over time the traffic volumes are expected to increase and the traffic congestion will continue to worsen.
- Roadway Widening As the project evolved a total of six different concepts were evaluated, each involving slightly different lane arrangements with varying degrees of impacts within the right-of-way, adjacent properties, and Mountain Farms Brook. The Town has work diligently, meeting numerous times with the abutting property owners, condominium associates, and the Town's Pedestrian and Bicycle Commission. Based on the feedback we received, the current proposal best serves all roadway users and addresses the long term traffic congestion issues at this intersection.

#### **PUBLIC OUTREACH**

Over the past two years, the Town has worked closely with various stakeholders. We have attended several meetings with the Mountain Commons Condominium Association Board and presented the project at their Annual Meeting to the entire community. This development is located near the southeast corner of the intersection. We also attended meetings with the Governor's Row Condominium Association Board, which is located on the northeast corner of the intersections. These discussions proved very productive. Many of the community's concerns were addressed in advance of the Public Informational Meeting, held on October 29, 2018. The meeting was well attended by about 50 residents, who provided some great feedback. Everyone recognized the need for the project and there was virtually no opposition to the proposed improvements.

#### **COST ESTIMATE AND SCHEDULE**

Funding for this project was secured through the LOTCIP, and was capped at \$1,552,400. The Town will be responsible for all design related costs and the State will fund 100% of the construction phase.

The Town is currently working towards Semi-Final Design, which is expected to be submitted to the Capitol Region Council of Governments for review in July of 2019. The project design is expected to be completed by January 2020 and advertised in February of 2020. Construction is expected to be completed by the end of 2020.



DEPARTMENT OF COMMUNITY
DEVELOPMENT
PLANNING DIVISION
TOWN OF WEST HARTFORD
50 SOUTH MAIN STREET
WEST HARTFORD, CT 06107-2431
TEL: 860.561.7555 FAX: 860.561.7504

www.westhartfordct.gov

## PERMIT APPLICATION FOR INLAND WETLANDS & WATERCOURSES ACTIVITY: (check one of the following)

				GULATED A		
File #:				Date Rece	ived:	
Street Address of Proposed Activity:						
Zone:	Acr	eage/Lot Area: _	Parcel/Lot#	<b>!:</b>		
Application Fee:		Surcharge F	ee: Affida	vit Fee:		
Applicant's Inter	est in Prope	rty: Improve cap	pacity at the intersection	of Mountain Ro	oad and Albany	
Avenue to acco	mmodate e	xisting and futur	e vehicular demand, and	d improve inters	section safety.	
<b>Brief Description</b>	of Proposed	Activity: Wide	n Mountain Road north 8	& south of Alba	ny Avenue to	
_		S- 18	uires the extension of the			
			ntained herein and in all suppor			
and belief. Furthern Staff inspections of th	ore, the applic e site. <i>Note: N</i>	ant agrees that subm otice is hereby given to	nission of this document constit the Connecticut Department of P. ion area or watershed area. (CTI	utes permission and ublic Health must be	d consent to Commi	
Town of West Ha	artford		Town of West Hart	ford - Duane J.	Martin, PE	
Record Owner's	Name		Applicant's Name	Town E	ngineer	
50 South Main S	Street		50 South Main Stre	eet		
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Street			Street			
Street West Hartford	СТ	06107		СТ	06107	
Street	CT State	06107 <b>Zip</b>	Street		06107 Zip	
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GIS CODE #:	 	 	 	 
For DEEP Use Only				

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Affirmative Action/Equal Opportunity Employer

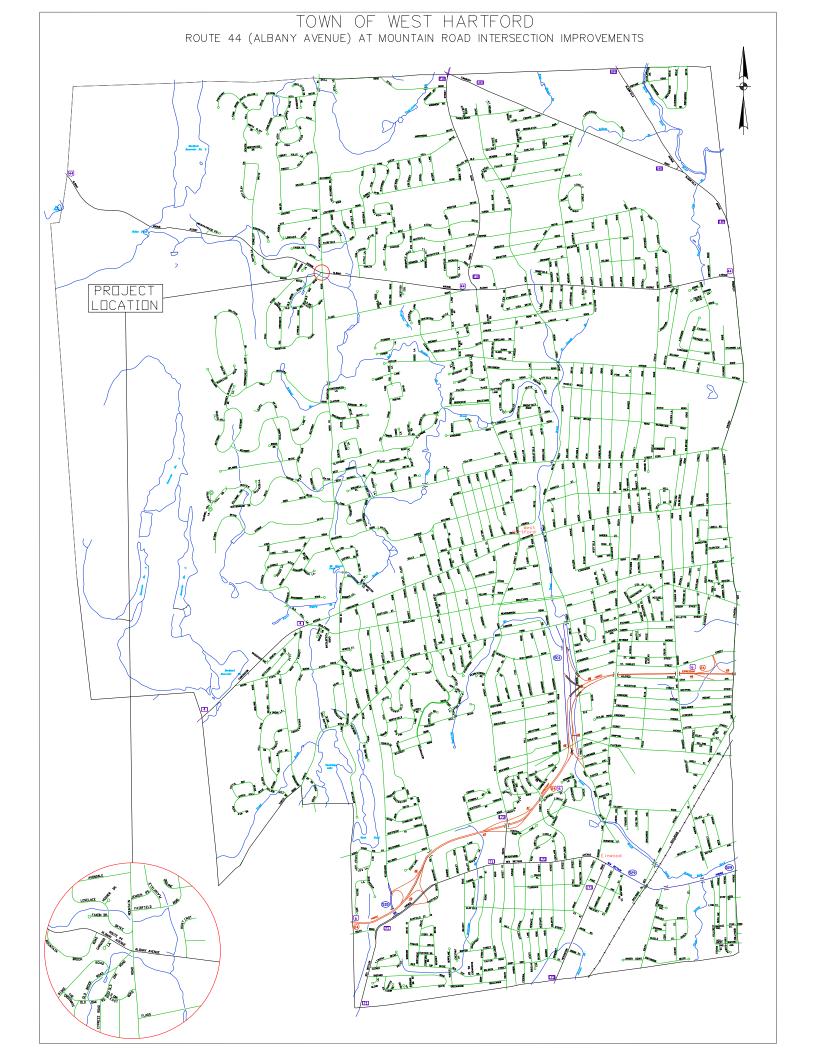
### Statewide Inland Wetlands & Watercourses Activity Reporting Form

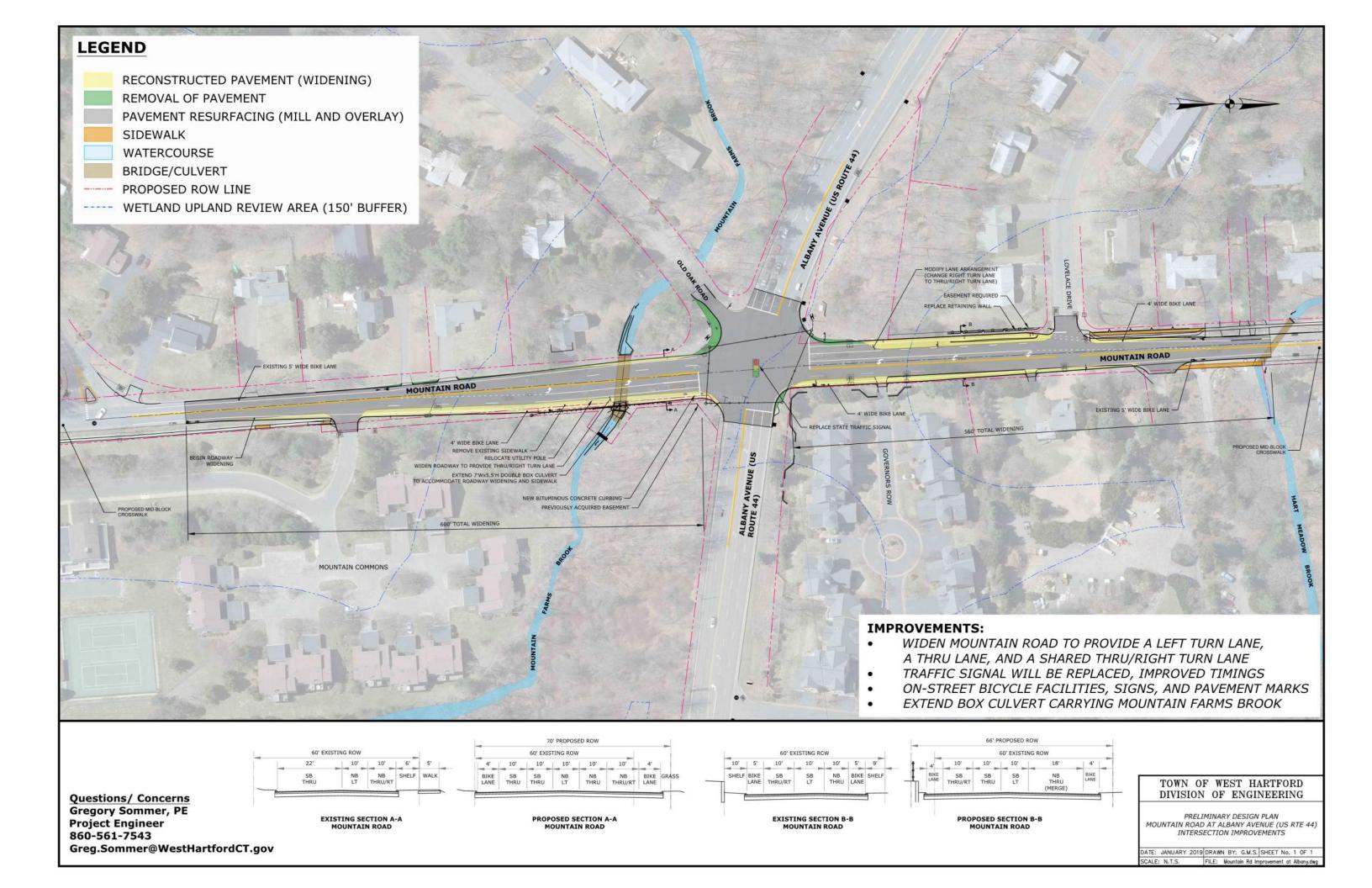
Please complete and mail this form in accordance with the instructions on pages 2 and 3 to:

DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3<sup>rd</sup> Floor, Hartford, CT 06106

Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.

	PART I: Must Be Completed By The Inland Wetlands Agency
1.	DATE ACTION WAS TAKEN: year: month:
2.	ACTION TAKEN (see instructions, only use one code):
3.	WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4.	NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:
	(print name) (signature)
	PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant
5.	TOWN IN WHICH THE ACTION IS OCCURRING (print name): Town of West Hartford
	does this project cross municipal boundaries (check one)? yes ☐ no ☒
	if yes, list the other town(s) in which the action is occurring (print name(s)):,
6.	LOCATION (see instructions for information): USGS quad name: Avon or number: 36
	subregional drainage basin number: 4403
7.	NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name):
8.	NAME & ADDRESS / LOCATION OF PROJECT SITE (print information): Mountain Road at Albany Avenue (Route 44)
	briefly describe the action/project/activity (check and print information): temporary   permanent   description:
	Extend Mountain Farms Brook culvert to accommodate the widening of Mountain Road in the vicinity of Albany Ave.
9.	ACTIVITY PURPOSE CODE (see instructions, only use one code):E
10.	ACTIVITY TYPE CODE(S) (see instructions for codes): 4 9 10 , 12
11.	WETLAND / WATERCOURSE AREA ALTERED (must provide acres or linear feet):
	wetlands:0.05 acresopen water body:N/A acresstream:21linear feet
12.	UPLAND AREA ALTERED (must provide acres): acres
13.	AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): 0.0 acres
DA	ATE RECEIVED: PART III: To Be Completed By The DEEP DATE RETURNED TO DEEP:
FC	DRM COMPLETED: YES NO FORM CORRECTED / COMPLETED: YES NO







Mountain Road at Lostbrook Road – Looking north. Typical weekday afternoon traffic.



Mountain Road at Lostbrook Road – Looking south. Typical weekday afternoon traffic.



Mountain Road at Albany Avenue – Looking northeast towards intersection.



Mountain Road at Albany Avenue – Looking northwest towards intersection.



Mountain Road just north of Albany Avenue – Looking north.



Mountain Road just north of Albany Avenue – Looking south.



Mountain Road – Looking southwest. Existing retaining wall to be replaced.



Mountain Road – Looking north. Staging area for Mountain Farms Brook culvert work.

## **Existing Condition Photos – Mountain Farms Brook Box Culvert**



Inlet – Looking East



Outlet – Looking West

## **Existing Condition Photos – Mountain Farms Brook Box Culvert**



Outfall - looking down from edge of sidewalk.



Wing Wall on Outlet – Looking north. Erosion visible along northern bank.

**Existing Condition Photos – Mountain Farms Brook Box Culvert** 



East of box culvert – Looking northeast. Erosion visible along northern bank.



Northern Box Culvert – Looking west. Accumulated sediment at inlet restricts flow.



Mountain Road – Looking north. Proposed landscaping along Mountain Commons frontage.



Mountain Road – Looking north. Cherry trees to be removed and replaced.